Abstract (Fig. 1)

The invention concerns a method for determining a deviation of at least one regulating variable on chip removal machines with a mechanical drive for a tool and/or a workpiece 1, regulated by a control system, wherein the regulation comprises a plurality of values C, X, Z of at least three spatial axes c, x, z for the control system and for the drive, and the values C, X, Z have a functional relation such as $Z = f_{bi}(C, X)$ with the axes c, x, z. A protocol is prepared from a plurality of control system actual values ($C_{p,s}$, $X_{p,s}$, $Z_{p,s}$) detected by measuring means and/or selected drive actual values ($C_{p,a}$, $X_{p,a}$, $Z_{p,a}$) and a control system nominal value according to $Z_{bi,s} = f_{bi}(C_{p,s}, X_{p,s})$ and/or a drive nominal value according to $Z_{bi,a} = f_{bi}(C_{p,a}, X_{p,a})$ is calculated at least in relation to the z-axis, and a control system differential value according to $D_{z,s} = Z_{p,s} - Z_{bi,s}$ and/or a drive differential value according to $D_{z,a} = Z_{p,a} - Z_{bi,a}$ is calculated at least in relation to the z-axis. The invention also pertains to a chip removal machine which implements such a method.

List of reference symbols

1	workpiece
2	positive deviation
2.1	positive deviation of 1st degree
2.2	positive deviation of 2nd degree
2.3	positive deviation of 3rd degree
3	negative deviation
3.1	negative deviation of 1st degree
3.2	negative deviation of 2nd degree
3.3	negative deviation of 3rd degree
4	z-value